BURLINGTON NORTHERN SANTA FE RAILROAD,
CAJON SUBDIVISION , STRUCTURE NO. 65.8
Between Cajon Summit and Keenbrook
Devore vicinity
San Bernardino County
California

HAER CA-2259-P
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PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORD
PACIFIC WEST REGIONAL OFFICE
National Park Service
U.S. Department of the Interior
1111 Jackson Street, Suite 700
Oakland, CA 94607

HISTORIC AMERICAN ENGINEERING RECORD

HAER
CA-2259-P

Burlington Northern Santa Fe Railroad, Cajon Subdivision,
Structure No. 65.8

HAER No. CA-2259-P

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| Location: | BNSF Railway Company (BNSF) Railroad Structure No. 65.8, a reinforced-concrete pipe culvert, is located at Milepost 65.8 on Main Tracks 1 and 2, Devore vicinity, San Bernardino County, California. The culvert is bounded by the Union Pacific Railroad to the west and Cajon Boulevard (historic U.S. Highway 66) to the east.<br><br>The culvert lies within the SE ¼ of the SE ¼ of the NW ¼ of Section 13, Township 2 North, Range 6 West, on the 1956 Cajon, California, 7.5-minute U.S. Geological Survey quadrangle (photorevised 1988). Universal Transverse Mercator Coordinates: Zone 11, NAD83, Geodetic Reference System 1980 ellipsoid, 3791070 mN, 456693 mE (inlet); 3791069 mN, 456704 mE (outlet). |
| Date of Construction: | 1938 |
| Architect/Engineer: | unknown |
| Builder: | Atchison, Topeka and Santa Fe Railway (AT&SF) |
| Present Owner: | BNSF |
| Present Use: | Culvert on Main Tracks 1 and 2. |
| Significance: | The section of railroad through Cajon Pass provided a vital link between the greater Los Angeles area and distant markets. In 1998, the California State Historic Preservation Office determined the historic route of the AT&SF (now BNSF) railroad alignment through Cajon Pass to be eligible for listing in the National Register of Historic Places under Criteria a and c. By connecting Los Angeles and San Bernardino to markets throughout the United States, the railroad dramatically affected demographic, commercial, and cultural trends in Southern California. Furthermore, construction of the long, winding alignment through rugged and often steep terrain represents a significant engineering feat for its time. Structure No. 65.8 contributes to the function and significance of the railroad line by mitigating the effects of erosion on the integrity of the system. |
| Report Prepared by: | Scott Thompson, Senior Historian<br>John Goodman, Archaeologist<br>Statistical Research, Inc.<br>Tucson, Arizona |
| Date: | March 2008 |

## I. ARCHITECTURAL AND ENGINEERING INFORMATION

Structure No. 65.8 is a reinforced-concrete pipe culvert located on a minor drainage just west of Cajon Creek (Figure 1). A culvert is a structure designed to protect the roadbed from the erosive effects of storm runoff by carrying water safely under the track. Culverts are placed at points along the roadbed where the railroad intersects normally dry channels. The size of a culvert is determined by the anticipated rate of flow during periods of heavy rainfall (Hay 1953:282, 284; Webb 1932:249).

This culvert consists of a 36" oval pipe with headwalls, wing walls, and aprons at the inlet and outlet transitions. The length of the pipe is 40'-0" (Bridge List, First District, Los Angeles Division, p. 49, Structures Department, BNSF Railway Company, Kansas City, Kansas). The pipes were likely precast, whereas the other elements of the structure were cast in place. The headwalls and wing walls hold back the roadbed fill from the pipe openings, and the aprons prevent scouring around the inlet and outlet openings. On the upstream side of the structure the headwall is 5'-10" long and has a height of 4'-6". A date of 1938 is stamped into the headwall above the inlet opening. The flared, downward-sloping wing walls each have a length of 5'-5" and a maximum height of 5'-0". At the inlet, the concrete pipe is recessed about 6" into the headwall. On the downstream side of the structure, the headwall has a length of 6'-6" and a height of 4'-6" and bears the date 1938. The wing walls each have a length of 5'-0" and a maximum height of 4'-0"; they taper downward from a maximum width of 1'-0" to a minimum width of 8". The apron measures 5'-10" wide between the ends of the wing walls.

## II. REFERENCES CITED

Hay, William W.
1953 *Railroad Engineering, Volume One.* John Wiley & Sons, New York, and Chapman and Hall, London.

Webb, Walter L.
1932 *Railroad Construction: Theory and Practice.* 9th ed. John Wiley and Sons, New York.

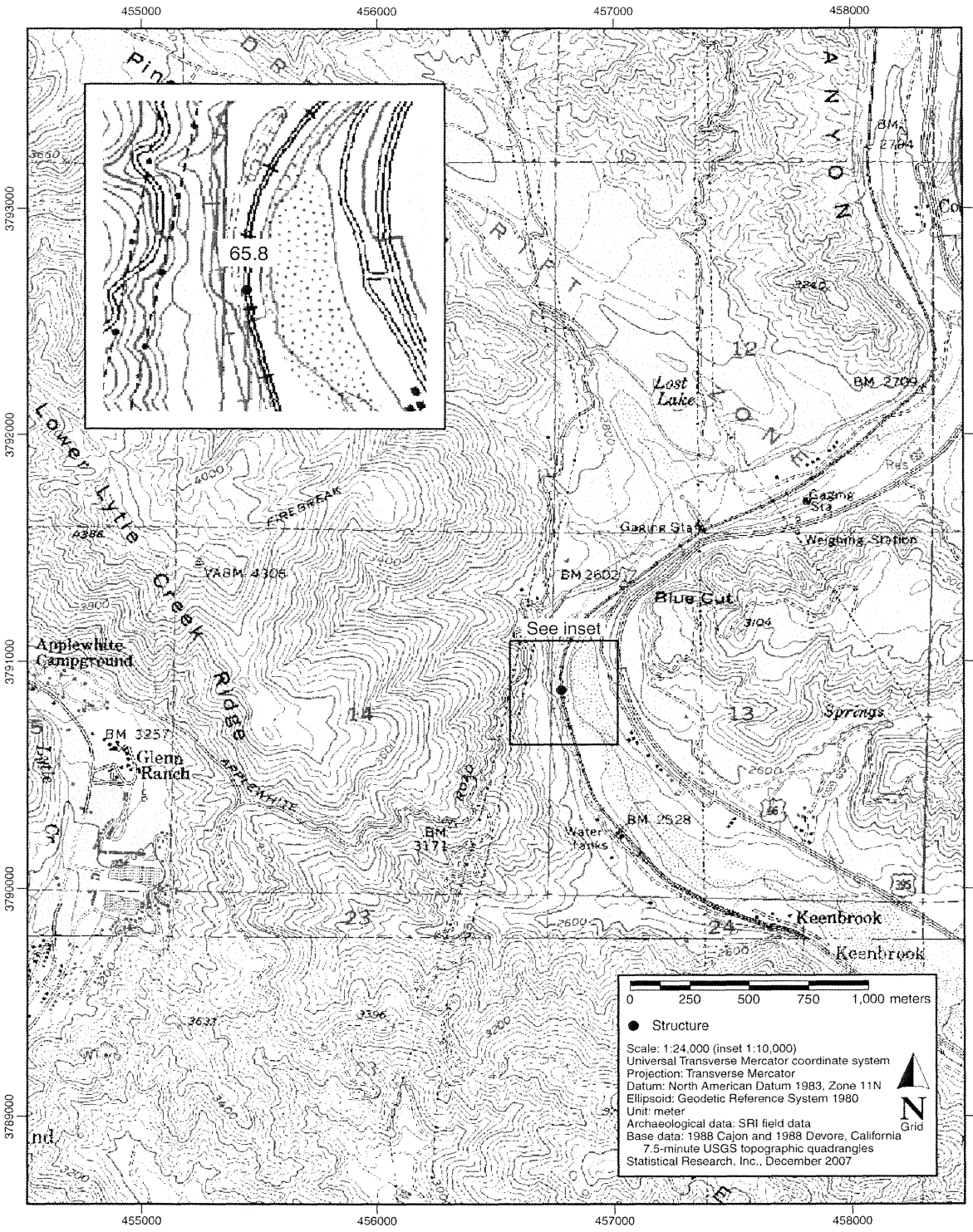


**Figure 1. Project location (1956 Cajon, California, 7.5-minute U.S. Geological Survey quadrangle [photorevised 1988]).**

HISTORIC AMERICAN ENGINEERING RECORD

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David G. De Vries, photographer June 2007

CA-2259-P-1 CONTEXT VIEW, TO THE NORTHWEST. [88]

CA-2259-P-2 WEST ELEVATION (INLET). [86]

CA-2259-P-3 EAST ELEVATION (OUTLET). [87]

Kodak 400TMY

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